



EDUCATION COMMITTEE

ANNUAL REPORT

for the year 1921,

BY

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MEMBERS OF THE EDUCATION COMMITTEE, 1920—21.

The Mayor (The late Alderman L. Cotton, J.P., until 7th May, 1921, Alderman J. Fielding, J.P., from 19th May, 1921).		*Ven. Archdeacon Richardson, M.A. (died 15th Nov., 1921).
†*Alderman Watson (Chairman of Elementary Education Sub-Committee).		†*Rev. J. E. Samuel, M.A. (Chairman School Attend- ance Reference Sub-Com- mittee).
†*Councillor Johnson.		†*Rev. W. A. Downham.
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„ Bates.		†*Miss Eccles.
„ Brierley.		Miss Gardner.
„ Read (Vice-Chairm'n		†*Mrs. H. W. Boddy.
* „ Stanworth.		

*Elementary Education Sub-Committee.

†School Attendance Reference Sub-Committee.

A. H. WHIPPLE, M.A., B.Sc.
Director of Education.

SIR LEWIS BEARD,
Town Clerk.

STAFF OF THE SCHOOL MEDICAL SERVICE.

Medical Officer of Health and School Medical Officer :

W. ALLEN DALEY, M.D., B.S., B.Sc. (Lond.), B.A. (R.U.I.),
D.P.H. (Camb.).

Assistant School Medical Officers :

JAMES ROBERTSON, M.B., C.M. (Glasgow), D.P.H. (Royal
Colleges of Physicians and Surgeons, Edinburgh and Glasgow).

LYDIA M. HENRY, M.D. (Sheffield), (appointed 15th, Feb., 1921).

School Dentist :

MARION S. MACKINNON, L.D.S. (Glasgow),
(Appointed 1st March, 1921).

Ophthalmic Surgeon (part time) :

W. BARRIE BROWNLIE, F.R.C.S. (Edin.), M.D. (Glasgow)

School Nurses :

E. BARTON. C. DWYER. D. V. GARDNER.

T. BROTHERS (Appointed 1st May, 1921).

In Charge of Swedish Remedial Exercises Clinic :

IDA HOLMES.

School Clinics.

NAME.	PURPOSE.	WHERE HELD.	TIMES.
Inspection Clinic	Special Examination of Cases Referred by Teachers, School Attendance Officers and School Nurses.	Health Department Town Hall.	Tuesdays and Fridays, 2 p.m. ; Saturday morn- ings (by appointment).
Ophthalmic Clinic	Prescription of Spectacles.	„	Mondays, 1-30 p.m. Thursdays, 9-30 a.m.
Dental Clinic	Dental Treatment.	„	Every week-day (by appointment.)
Minor Ailments Clinic.	Treatment of Minor Diseases of Skin, etc.	„	Every week-day, at 8-45 a.m.
„	„	119, Bolton Road.	Mondays to Fridays at 3-45 p.m. ; Saturdays, 9-0 a.m.
Cleansing Station.	Treatment of Scabies and Cleansing Verminous Cases.	Throstle Street.	Arranged as required.
Throat Clinic.	Operative Treatment of Adenoids and Enlarged Tonsils.	Blackburn & E. Lanes. R. Infirmary	Saturday mornings as required.
Remedial Exercises.	Treatment of Deformities.	Health Department, Town Hall.	Mondays and Thursdays, 2 p.m. ; other times by appointment.

“ The health, and with it the industrial efficiency of the future adult population of the Kingdom, largely depend on the preventive work which will be carried out in the schools in the immediate future.”

—SIR GEORGE NEWMAN, M.D.

PUBLIC HEALTH DEPARTMENT,

TOWN HALL,

BLACKBURN,

18th February, 1922.

*To the Chairman and Members of the Education Committee
of the County Borough of Blackburn.*

LADIES AND GENTLEMEN,

I have the honour to present herewith my Second Annual Report, being the 18th of the series, on the Medical Inspection and Treatment of School Children.

The inspection clinics and most of the routine inspections were conducted by Dr. Robertson ; some of the routine inspections were carried out by Dr. Lydia M. Henry.

The statistics in this Report have been prepared by Mr. Fowler (Chief Clerk), Mr. Pemberton, and Mr. Marsden.

The year has shown a gratifying development of the work, and while improvements can still be suggested, it is obvious that consolidation rather than further expansion is called for during the next few years.

The staff has been brought up to full strength by the appointment of a Lady Doctor who, however, devotes only a part of her time to the School Medical Service, a Lady Dentist, and a fourth School Nurse.

The most important matters to which I would direct your attention are :—

(1). The inauguration of medical inspection of children attending the High School for Girls (including the Crosshill Preparatory Department), and the Queen Elizabeth Grammar School. (Pages 58 to 65).

(2). The inauguration of a scheme for preserving the teeth of school children. (Pages 40 to 43).

(3). The inauguration of a Clinic for the Treatment of Deformities and Deficient Chest Expansion by Swedish Remedial Exercises. (Page 43).

(4). The opening of a subsidiary clinic for the treatment of Minor Ailments at 119, Bolton Road. (Page 33).

(5). The increase of the time devoted to the Authority's work by the Ophthalmic Surgeon from one to two sessions per week. (Page 37).

(6). The satisfactory results of the Cleanliness Surveys by the Nurses who visit the Schools periodically for this purpose. (Page 23).

(7). The large use made of the new arrangement with the Committee of the Blackburn and East Lancashire Royal Infirmary for the operative treatment there of cases of adenoids and enlarged tonsils. (Page 39).

This Report and its immediate predecessor are necessarily, owing to the expansion of the work, long and somewhat detailed. Further, the form and length of the Report are determined largely by the requirements of the Board of Education. The Ministry of Health now requires a detailed report from Medical Officers of Health every five years only, and I would suggest that in the interests of

economy the Board of Education should make a similar decree, provided, of course, that the detailed reports to them and to the Ministry of Health could be prepared in different years.

It is obvious that the success of the Department depends almost entirely on the efficiency and loyal co-operation of each of its members, and I have much pleasure in expressing my thanks to them.

It is my pleasant duty to acknowledge my indebtedness to the Director of Education, and various members of his staff, for the advice and assistance I have received from them on the many occasions upon which I have sought it, and for the very large amount of information which they have so willingly supplied for inclusion in this Report.

In conclusion, I beg to thank most warmly the Chairman and Members of the School Attendance Reference Sub-Committee for their unfailing support.

I am, Ladies and Gentlemen,

Your obedient Servant,

W. ALLEN DALEY,

School Medical Officer.

COUNTY BOROUGH OF BLACKBURN.

Table 1.

NUMBER OF SCHOOLS AND CHILDREN.

There are 14 Council and 32 Non-Provided Schools in the town; the following table gives particulars of the attendances during 1921.—

	No. on Rolls.	Average Attend- ance.	No. of Half- timers.	Percentage of Average Attendance
Boys' Schools	2900	2629	177	90·6
Girls' Schools	2784	2463	231	88·4
Mixed Schools	7190	6384	659	88·7
Infants over Five	4556	4636	—	80·7
Infants under Five	1187	—	—	—
TOTALS	18,617	16,112	1,067	86·5
Church of England Schools ..	9345	8086	517	86·5
British Schools	716	604	54	84·3
Roman Catholic Schools ..	3634	3162	216	87·0
Council Schools	4922	4260	280	86·5
TOTALS	18,617	16,112	1,067	86·5

The High School, including Crosshill Preparatory School, has 493 scholars, and the Queen Elizabeth Grammar School 419.

COST.—I am indebted to the Borough Treasurer for the following :—

The rateable value of the Borough in 1921—22 was £626,117.

The gross cost of medical inspection for the twelve months ended March 31st, 1921, was £2,134; the Government grant was half this expenditure; hence the net cost to the rates was £1,067.

The cost of the School Medical Service per child on the School rolls was 31·7d. gross and 15·85d. nett, and the cost as a decimal part of a penny rate was 0·88d. gross and 0·44d. nett.

ADMINISTRATION.

STAFF. The staff engaged in the work of the School Medical Service during 1921 comprised the School Medical Officer, who devotes about 1/6th of his time to this branch of his work ; an Assistant School Medical Officer, Dr. Robertson, whose whole time practically is occupied in duties connected with the health of school children ; a Lady Assistant School Medical Officer, Dr. Henry, about one-third of whose time is devoted to the School Medical Service, the remainder being devoted to Maternity and Child Welfare and the treatment of women and children at a special clinic at the Blackburn and East Lancashire Royal Infirmary ; a part-time Ophthalmic Surgeon who works for the Authority on two sessions a week ; and four whole-time School Nurses. From 17th January, 1921, Miss Holmes, the Organiser of Physical Instruction, conducted a Clinic in breathing exercises, and on the 28th November, 1921, she started a class in Swedish Remedial Exercises for children with deformities.

Routine inspections were made of all children in the Public Elementary Schools—(a) at their entrance to school :—"entrants" ; (b) at the age of eight years, that is to say, children born during the year 1913:—"intermediates" ; (c) at the age of 12 years, that is, those born in the year 1909, or those who had not been subjected to routine inspection since reaching their twelfth birthday :—"leavers."

Normally, each school is visited by a Medical Inspector for routine examination three times a year, and on each of these occasions the teachers are invited to submit for examination any ailing child on whose case a medical opinion is desired. It is hoped that all the children employed out of school hours will be presented to the doctor on these occasions so that he may determine whether or not the employment is prejudicial to the child's health. Children who are absent at a routine inspection are seen at the next visit should they be in school then, but it is feared that in a certain small number of cases children are kept away purposely whenever it is known that a medical inspection will take place. A parent is always invited to be present at a routine medical inspection. The possibility of children escaping inspection, owing to a clerical error on our part, has been lessened by inviting the co-operation of the teachers in checking immediately before each inspection our list of children of the ages for which medical inspection is provided. Admission forms, sent by the teachers, are the basis

of our registration system, and any delay in their transmission hampers our work considerably. We are now endeavouring to make the routine inspection cards, which are kept at the Town Hall, a complete record of the children's medical history during their school life, and records of visits to the Inspection Clinics at the Town Hall are entered thereon.

PREMISES. Despite the fact that a subsidiary clinic for the treatment of minor ailments was opened on the 31st March, 1921, at 119, Bolton Road, which was formerly a Maternity and Child Welfare Centre, the waiting accommodation for the Minor Ailments and Ophthalmic Clinics held at the Town Hall is becoming more and more insufficient for the needs owing to the larger numbers who now attend.

An excellent dental clinic, with waiting room attached has been provided on the top floor of the Town Hall, to which access is obtained by means of a lift, a ride in which is regarded by certain of the patients as sufficient reward for their visit to the dentist. A room adjoining the dental clinic has been furnished with apparatus for the treatment of deformities.

SCHOOL HYGIENE. The following schools were re-decorated during the year :—

St. Matthew's,
St. Barnabas',
Park Road,
Mill Hill (Norfolk Street),
St. Luke's.

A detailed report on the sanitary condition of the schools is in preparation ; in the meantime it may be said that certain schools are far from satisfactory. In some the provision for heating is insufficient ; in these and in others the means provided for ventilation are unsatisfactory ; in many there is inadequate accommodation for washing ; in some the playgrounds are unpaved, being covered with mud in winter and dust in summer. The artificial lighting in several schools is inadequate ; the desks in some schools cannot be, or are not, arranged in such a way as to prevent "glare," or a child sitting in its own shadow. The desks in many schools do not conform to modern ideas and the pupils sitting in them are apt to become round-shouldered. In a few schools the "sanitary" conveniences belie their name.

It cannot be too often pointed out that as attendance at school is compulsory, it is essential that the school environment should be the best possible. It is worthy of note that when children attending ordinary schools become delicate and suffer from such diseases as anæmia, bronchitis, or consumption in its earlier stages, we send them to an open-air class, where they spend all their school time in the open air. They are, of course, well clothed, blankets being supplied to keep them warm, and they are protected from the rain. They almost invariably show a marked improvement; when they return to an ordinary school they sometimes relapse. This is surely a serious indictment of our existing school system, and a strong argument for improving the atmospheric conditions there, for example, by making at least one side of every classroom so that it can be opened completely, provision for temporary closure being made by canvas curtains, or by folding doors with glass panels.

MEDICAL INSPECTION.

The following table gives the number of examinations performed.—

TABLE I.

NUMBER OF CHILDREN INSPECTED IN THE ELEMENTARY SCHOOLS, 1ST JANUARY, 1921, TO 31ST DECEMBER, 1921.

A.—ROUTINE MEDICAL INSPECTION.

AGE	ENTRANTS					
	3	4	5	6	Other ages.	Total.
Boys	20	180	578	250	148	1176
Girls	30	223	575	264	162	1254
TOTALS	50	403	1153	514	310	2430

AGE.	LEAVERS.						Grand Total.
	Inter-mediate Group. 8	12	13	14	Other ages	Total	
Boys	896	848	50	13	—	1807	2983
Girls ..	855	897	35	21	—	1808	3062
Totals	1751	1745	85	34	—	3615	6045

B.—SPECIAL INSPECTIONS.

AGE.	SPECIAL INSPECTIONS.	
	Special Cases.	Re-examinations (i.e. No. of Children re-examined.
Boys.....	1004	1515
Girls	1098	2021
TOTALS	2102	3536

The total number of children inspected by the Medical Officer, whether as routine or special cases, no child being counted more than once in the year, was 7,537.

The 2,430 entrants include 273 children under five years of age who were not subjected to a detailed examination. They will be re-examined and a full inspection made when they attain the age of five years.

Table 2.

WORK OF PAST YEARS. The following table shows the total number of medical examinations since the inauguration of the work :

ELEMENTARY SCHOOLS.				SECONDARY SCHOOLS		Total.
Year.	Routine In- spections.	Spécial Exam- inations.	Re-exam- inations.	Exam- inations.	Re-exam- inations.	
1908	2118	654	—	—	—	2772
1909	4581	485	—	—	—	5066
1910	7606	385	—	—	—	7991
1911	9064	527	1874	—	—	11465
1912	4972	583	2403	—	—	7958
1913	4763	1630	2227	—	—	8620
1914	5056	883	949	—	—	6888
1915	4968	1523	1789	—	—	8280
1916	4922	1107	2447	—	—	8476
1917	6240	2039	2061	—	—	10340
1918	3053	1656	1588	—	—	6297
1919	7138	1679	1957	—	—	10774
1920	5935	2076	4859	—	—	12870
1921	6045	2102	3536	938	105	12726
	76461	17329	25690	938	105	120523

ACCOMMODATION FOR THE ROUTINE INSPECTIONS. The Inspections take place under the same conditions as those described last year ; in many schools the accommodation available is far from satisfactory. It must be recognised that a school in full use is not a place in which careful medical examinations can be carried out ; the alternative is to take the children from the schools where the accommodation is most inadequate to a convenient centre where proper provision could be made, but this would disorganise school work even more than at present.

FINDINGS OF MEDICAL INSPECTION. The following Table shows the number of defects found in children submitted for routine or special examination during the year :—

TABLE II.

RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL
INSPECTION IN THE ELEMENTARY SCHOOLS IN 1921.

	Routine Inspections.		Specials.	
Defect or Disease.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.
Number Examined.....	5772		2102	
MALNUTRITION	30	6	7	—
UNCLEANLINESS				
Head	522	—	297	—
Body.....	30	—	85	—
SKIN				
Ringworm				
Head.....	14	—	68	—
Body.....	1	—	18	—
Scabies.....	6	—	53	—
Impetigo	17	—	403	—
Other Diseases (Non-Tubercular)	8	5	83	3
EYE				
Blepharitis	41	—	10	—
Conjunctivitis	2	—	13	—
Keratitis.....	—	—	—	—
Corneal Ulcer.....	—	—	2	—
Corneal Opacities.....	5	2	2	—
Defective Vision.....	313	268	82	6
Squint.....	69	32	2	4
Other Conditions.....	3	1	7	—

TABLE II.—Continued.

Defect or Disease.	Routine Inspections.		Specials.	
	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.
EAR				
Defective Hearing	19	19	3	—
Otitis Media	23	4	12	—
Other Ear Diseases.....	5	2	5	1
NOSE AND THROAT				
Enlarged Tonsils	135	149	6	1
Adenoids	2	3	—	2
Enlarged Tonsils and Adenoids	64	6	9	—
Other Conditions	1	1	1	—
Enlarged Cervical Glands (non-tubercular)	—	5	—	1
Defective Speech	—	4	—	2
TEETH—Dental Defects	913	2	4	—
HEART AND CIRCULATION				
Heart Disease—				
Organic	14	18	3	5
Functional	—	37	—	1
Anæmia	37	12	11	11
LUNGS				
Bronchitis	24	22	15	6
Other Non-tubercular Diseases.....	—	20	3	3
TUBERCULOSIS				
Pulmonary				
Definite	3	—	7	1
Suspected	—	7	—	—
Non-Pulmonary				
Glands	3	7	6	3
Spine	—	—	—	1
Hip	—	1	—	—
Other Bones and Joints...	—	—	—	—
Skin	2	1	—	1
Other Forms	5	1	7	2
NERVOUS SYSTEM				
Epilepsy	1	—	—	5
Chorea	—	2	6	4
Other Conditions	2	3	—	6
DEFORMITIES				
Rickets	4	2	—	—
Spinal Curvature	10	5	—	—
Other Forms	18	8	1	—
Other Defects and Diseases....	7	5	35	15

Number of individual children having defects which required treatment or to be kept under observation..... 2906

The following defects were found in the 273 entrants under five years of age who were not subjected to routine inspection, but simply marched past the Medical Inspector :—Squint 4, dirty head 3, impetigo 3, eye disease 1, enlarged tonsils 1. They are not included in Tables II or VI, but the figure 2906 which gives the total number of children having defects does include these cases.

It will be seen from Tables I and II that of the 7,537 children examined, 2,906, or 38% suffered from a defect which required either treatment or to be kept under observation. The next Table, VI, refers only to children examined at routine inspection, that is, children selected not because of suspected defect but solely because they happened to be of the ages for routine inspection :—

TABLE VI.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED AT
ROUTINE INSPECTIONS IN THE ELEMENTARY SCHOOLS DURING THE
YEAR 1921.

	No.	Per Cent.
1. Total number of children medically inspected at routine inspections	5772	
2. Number of children in (1) suffering from .—		
Malnutrition	36	0·6
Skin Disease	51	0·8
Defective Vision (including Squint) ..	682	11·8
Eye Disease	54	0·9
Defective Hearing	41	0·7
Ear Disease	34	0·6
Nose and Throat Disease	1000	17·3
Enlarged Cervical Glands (non-tubercular)	936	16·2
Defective Speech	27	0·4
Dental Disease.. .. .	915	15·8
<i>Heart Disease :—</i>		
Organic	32	0·5
Functional	38	0·6
Anæmia	54	0·9
Lung Disease (non-tubercular)	83	1·4

TABLE VI.—Continued.

	No.	Per Cent.
<i>Tuberculosis :—</i>		
Pulmonary (definite)	3	0·35
„ (suspected)	7	0·1
Non-pulmonary	20	0·3
Disease of the Nervous System .. .	10	0·1
Deformities	277	4·8
Other Defects and Diseases	101	1·7
3. Number of children in (1) suffering from defects other than uncleanliness or defective clothing or footgear requiring to be kept under observation, but not referred for treatment	501	8·7
4. Number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.)	1353	23·4
5. Number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.)	573	42·3

As the Board of Education have now standardised the method of tabulation of the results of inspections, it is possible, for the first time, to give figures comparing the defects found in Blackburn children with those in children of other towns. It should be borne in mind that for most of the conditions with which we are dealing there is no definite standard, and the difference between the Blackburn figures for 1920 and 1921, some of which are set out below, show that by adopting different standards and different methods of recording the results, widely varying figures can be obtained. Conclusions based on the next two tables, therefore, must not be carried too far :—

Table 3. SHOWING PERCENTAGE OF CHILDREN FOUND DEFECTIVE AT ROUTINE INSPECTION IN ENGLAND AND WALES IN 1920, AND IN BLACKBURN IN 1920 AND 1921.

Year.	Percentage of inspected children found to be defective.	Percentage of inspected children referred for treatment.	Percentage of children referred for treatment who received it.
1920 England & Wales..	40·9	27·4	62·7
1920 Blackburn	18·1	15·1	37·0
1921 Blackburn	32·1	23·4	42·3

Table 4.

SHOWING THE PERCENTAGE OF DEFECTS FOUND AT ROUTINE INSPECTIONS IN 24 INDUSTRIAL AREAS IN ENGLAND AND WALES IN 1920, AND IN BLACKBURN IN 1920 AND 1921.

Physical Condition, etc.	Twenty-four Industrial areas in England and Wales.		Blackburn.	
			1920.	1921.
Uncleanliness, Head	8.2		3.6	9.0
„ Body	2.5		0.5	0.5
Malnutrition	3.8		0.2	0.6
Skin Disease	2.4		1.4	0.8
Defective Vision (including Squint)	14.5	*14.4	*11.8	
Eye Disease	2.0	1.1	0.9	
Defective Hearing	1.7	0.8	0.7	
Ear Disease	2.1	0.4	0.6	
Nose and Throat Disease.. ..	15.5	6.2	17.3	
Enlarged Cervical Glands (Non-tubercular)	7.5	19.5	16.2	
Defective Speech	0.8	0.3	0.4	
†Dental Disease.. .. .	23.9	9.1	15.8	
<i>Heart Disease :—</i>				
Organic	0.8	0.3	0.5	
Functional	1.3	0.2	0.8	
Anæmia	2.2	0.6	0.9	
Lung Disease (non-tubercular) ..	3.9	1.0	1.4	
<i>Tuberculosis :—</i>				
Pulmonary, definite	0.1	0.05	0.05	
„ suspected	0.5	0.08	0.1	
Non-pulmonary	0.3	0.3	0.3	
Disease of the Nervous System..	0.6	0.2	0.1	
Deformities	2.7	0.5	4.8	
Other Defects and Diseases ..	3.4	4.1	1.7	

*Of the intermediates and leavers only, as vision of entrants is not tested usually.

†Medical Inspection only.

The increased percentages of defective children recorded during 1921 as compared with 1920 do not necessarily mean that the

children are worse in health, the increase being caused by the adoption of more precise methods of recording defects, associated with increased facilities for treatment. Excluding cases where the only defect was carious teeth to the number of three or less, the percentage of boys with a physical defect was 51·2 and of girls 51.

CLOTHING AND FOOTWEAR. Of the 6,045 children seen by the Assistant School Medical Officers at the routine inspections, in only 15 was it necessary to describe the clothing as "dirty." In five, all boys, the clothing was reported to be "bad," and in one "insufficient." The footwear was bad, however, in 38 boys and 14 girls. The total of 52 compares with 38 in 1920. Sixty-five per cent. of the children wore clogs.

HEIGHT, WEIGHT AND NUTRITION. As was stated in last year's Report, a record of the height and weight of a child, particularly if taken at regular and not infrequent intervals, is one of the most valuable indices of health. If a child is steadily gaining weight there cannot be any serious impairment of physique, but if the weight is stationary, or even more so if there is a loss, careful medical examination is almost sure to reveal some defect. The weighing-machine acts as a sign-post which anyone can read, and as it points to "danger" at the very beginning of a disease, it fulfils a most important function in the School Medical Service. There never have been weighing-machines in the Blackburn schools; many years ago an attempt was made to record the weights of those subjected to routine inspection by transporting a weighing-machine from school to school, but the constant removal lead to inaccuracies, and the transport was costly and difficult; the scheme was, therefore, abandoned. A year ago the Sub-Committee concerned resolved to purchase six machines at a total cost of £45, and to provide another six each year until every school had one. Unfortunately the Board of Education refused to grant pay on this expenditure, and the purchase of the machines is, therefore, deferred.

The assessment of nutrition by the naked eye necessarily depends on the personal equation of the examiner, and his opinion is biassed by the physique of the children whom he has happened to see immediately before; the "standard" or "average" child being of poorer physique in some schools than in others, and naturally varies also in different towns. There were only 37 children who were regarded by the Assistant School Medical Officers as

“ill-nourished,” the percentage of those examined being 0·6. In 1920 the percentage was 0·2, and in the 24 industrial areas in England and Wales for which the 1920 figure was given by the Chief Medical Officer of the Board of Education, 3·8. The nutrition of 7·6 per cent. of the Blackburn was regarded as “excellent,” 77·8 per cent. “good,” and 13·9 per cent. “medium.”

CLEANLINESS. The association of vermin with infectious diseases, sores in the head, and enlarged glands in the neck, apart from a general irritability and interference with sleep caused by the movements of the parasites on the hair or on the body, makes it incumbent upon us to use every effort to lessen uncleanliness, and to protect the clean from contamination. The routine inspections record that vermin were seen on the heads of 8 boys and 10 girls. The scalps of 31 boys and 467 girls contained a large number of nits, which are the eggs of lice. The bodies of 80 boys and 51 girls were “somewhat dirty,” and 20 boys and 6 girls were “dirty.” These figures, unsatisfactory as they are, relate only to children whose parents have had notice of the proposed inspection. The School Nurses, in accordance with powers given by the Children Act, examine all children at school periodically. The scheme under which they work was described fully in my last Report, and, briefly, consists in an examination of each child twice a year. A child who is so dirty as not to be fit to mix with other children is excluded from school and the home visited at once by a nurse. In the less serious cases a notice for the parents is given to the child and re-examination takes place in three or four weeks. If still dirty a more strongly worded notice is sent to the parents, and the child is again examined after a further short interval. A fourth examination takes place some three or four months after the first of the series. Those who are still dirty at the fourth examination are visited at home.

Cleansing at the Cleansing Station at Throstle Street is offered to the very verminous, and an opportunity is given for all other members of the family to have a disinfectant bath there. Their clothes are disinfected whilst they are in the bath and on the same day the bedding and house are disinfected by the Sanitary Department.

Though some of the parents regard “nits” as “natural,” or even as a sign of health, there has been surprisingly little active

opposition to the scheme, and this is a testimonial to the tactful manner in which the School Nurses have carried out a disagreeable duty. The sympathetic assistance of the teachers has been a considerable help to us, especially in endeavouring to arrange for the children to be examined individually and not in front of the class. Owing to various causes the full scheme of two series of examinations in each school could not be carried out in 1921, but in every school except one there was one series of four examinations, and the average number of visits paid to each school was five. The total number of examinations for uncleanliness made by the Nurses was 28,623.

Table 5.

The following Table gives the results of the first examinations :

	No. examined.	No. clean.	A few Nits.	Numerous Nits.	Very numerous Nits.	Vermin seen.
Boys ..	6752	5508	778	234	124	108
Per cent. .	—	81·5	11·5	3·4	1·9	1·6
Girls ..	7991	3367	2101	1413	795	315
Per cent. .	—	42·1	26·3	17·7	10·0	3·9

Fifty-three boys and 103 girls were so verminous that they were excluded from school for a few days.

The next table shows the improvement which had been effected before the fourth examination :—

	A few Nits.	Numerous Nits.	Very numerous Nits.	Vermin seen.
Boys ..	88	10	1	11
Girls ..	1290	514	102	80

It is obvious that even the final result is unsatisfactory inasmuch as the girls, who had markedly dirty heads, numbered 696, but it is a consolation to know that if it had not been for this scheme the number would probably have been not 696 but 2,523, as it was at the first examination ; there is reasonable ground for hoping that as the parents of dirty children realise that we “ mean business ” there will be a much greater improvement. The figures for the first month of 1922 certainly indicate this.

During 1921 the number of home visits for uncleanliness paid by the School Nurses was 1,935 ; the number of children cleansed

at the cleansing station was 19, and another 17 had their heads cleansed at a Minor Ailments Clinic. It was unnecessary to prosecute anyone under the Children Act or the School Attendance Byelaws, although this was threatened on a few occasions.

Many mothers are deeply concerned when their attention is drawn to the presence of nits in their children's hair, and after trying vainly to get rid of them they apply to us for advice. This is given gladly by the School Nurses ; in their experience a certain proprietary soap or a shampoo, of which we have the formula, followed by combing with a special comb of very fine mesh, will generally free a bad head in a few days. We have a number of the combs, which are rather expensive, and we lend them to mothers on application.

A useful feature of the Nurses' visits to the Schools to examine for cleanliness was their discovery of other conditions which had arisen since the last routine medical inspection. The following is a list :—

Ear Diseases	52
Eye „	6
Defective Vision	42
Impetigo	169
Ringworm	52
Scabies (The Itch)	13
Whooping-cough	1
Chickenpox	3
Miscellaneous	24

Except in cases of wax in the ear, which are dealt with solely by the Nurses, these children are referred to the Inspection Clinic and then dealt with at the appropriate treatment clinic.

NOSE AND THROAT. Defects of the nose and throat are unfortunately very common and often lead to serious consequences such as deficient chest expansion, mal-development of nose and chest, mental dullness, liability to catarrhal infection and enlarged glands in neck, deafness, discharging ears, and following on this latter condition abscess of the brain and meningitis. It therefore behoves us to regard all such conditions seriously, and if possible to endeavour to prevent them. The most promising method of doing this is to see that children are taught to use their handkerchiefs properly

at an early age, and to ensure nose breathing, for if the nose becomes blocked an adenoid growth at the back tends to form. The need for taking handkerchief drill in school is obvious. It should be noted also that care of the teeth will lessen the liability to enlargement of the tonsils.

In 17·4 per cent. of the children examined at routine inspections there was some defect of the nose or throat. The girls were slightly worse than the boys and the entrants worse than the leavers. Of all the children subjected to routine inspection the percentages with enlarged tonsils were :—

Slight enlargement of both tonsils	..	2·3 per cent.
Moderate enlargement of both tonsils	..	8·6 per cent.
Great enlargement of one tonsil only	..	1·7 per cent.
Great enlargement of both tonsils		2·7 per cent.

The number of cases referred for treatment because of enlarged tonsils only was 135, and because of adenoids, generally associated also with tonsillar enlargement, 66. It was noted that in 70 cases submitted to routine inspection an operation on the throat had been performed.

SKIN DISEASES. Though still common, diseases of the skin are showing a tendency to decline ; owing to the more frequent visits of the Nurses to the Schools it is unlikely that any are now missed. The figures for 1920 are probably incomplete, yet even so a substantial improvement is shown :—

CASES DISCOVERED AT ROUTINE OR SPECIAL
EXAMINATIONS BY DOCTORS OR NURSES.

	1920	1921
Ringworm of the Head ..	139	82
Ringworm of the Body ..	39	19
Scabies	301	59
Impetigo	455	420
Other Skin Diseases	158	99
TOTAL ..	1092	679

DEFECTIVE VISION AND SQUINT. Squint was discovered in 45 boys and 57 girls ; in 34 boys and 35 girls correcting glasses were not worn and the vision in the squinting eye is, therefore, becoming worse, until finally, if nothing is done, the eye will become blind. As previously noted in this and other towns, boys have better vision than girls. Only 46·4 per cent. of the boys over seven years of age, and 41·1 per cent. of the girls had normal vision in each eye. A further 32·5 per cent. boys, and 34·2 per cent. girls had in their better eye either normal vision or slightly defective vision only (6/9 on Snellen's scale). Three hundred and twenty boys and 382 girls, being 17 per cent. and 20·6 per cent. of those examined, had in their worse eye vision of 6/12 or 6/24 only. Seventy-eight boys and 76 girls had seriously defective vision (6/36 or worse in one or both eyes). Amongst so many cases of defective vision, only 58 boys and 85 girls were, at the time of inspection, wearing suitable spectacles.

EAR DISEASE AND HEARING. Seventeen boys and ten girls were found to be suffering from middle ear disease, causing discharge from one or both ears. Forty-one children were recorded to have defective hearing, but this probably does not represent the total number of children whose hearing was not up to the standard. The "forced whisper," or "watch" tests, were not used, owing to the fact that in most schools there is considerable noise in the vicinity of the examination room. Those noted to be suffering from defective hearing were detected because of their inability to hear the examiner's remarks to them.

DENTAL. Miss Mackinnon, the Authority's dentist, started work on the 1st March, 1921, and before the end of the year had examined the teeth of all the children aged five, six, and seven years, and, except in 10 schools, of those aged eight years. The results of her inspections will be found on page 40.

The Assistant School Medical Officers record only cases of gross decay, and not the small foci discovered by the dentist with the aid of a probe and mirror. They found that a somewhat larger percentage of girls than of boys had healthy mouths. In both sexes the leavers had the best teeth, the entrants the next best, and the intermediates the worst. Taking all the groups together, 16·7% of the boys, and 14·4% of the girls, had four or more seriously carious teeth ; in each sex the number with one, two, or three bad teeth was 35%.

TUBERCULOSIS. At the routine inspections three cases of definite and seven of suspected tuberculosis of the lungs were found. There were ten cases of tuberculosis of the glands of the neck, five of tuberculosis of the eye, three of lupus, and one of tuberculous disease of the hip. Altogether 16 cases of tuberculosis not previously notified to the Medical Officer of Health were discovered as a result of the routine or special examination of school-children. All children attending school who had at any time been notified to be suffering from tuberculosis were specially examined as in previous years by the Assistant School Medical Officers. Thirty-eight children were thus examined and instructions given as to their further attendance at school. In 25 the condition was unchanged, in six improved, and in seven the disease appeared to be arrested.

TUBERCULOSIS CONTACTS. Children who have lived in the same house as cases of pulmonary tuberculosis were also examined. Fifty-two contacts were reported upon in 1921, and in one the disease was found.

HEART DISEASE. Nineteen girls and 13 boys were discovered at routine inspections to be suffering from valvular disease of the heart, and 25 boys and 23 girls from functional disease. Twenty-five of each sex were noted to be anæmic.

DEFORMITIES. Rickety deformities were noted at routine inspection in 146 boys and 78 girls, and there were 47 children found to be suffering from other deformities, mostly spinal curvature. It is gratifying that not only is the total number of cases showing rickety deformity becoming less, but the extent of the deformity is not so marked in the younger as in the older children.

DEFECTS OF SPEECH. At routine inspections 15 boys and eight girls were noted to have defective speech, generally a stammer. These numbers show what is general throughout the country, namely, that defective speech is much more common in boys than in girls. Owing to the existence in the town of a considerable number of children with a very marked impediment in their speech, the Authority in August, 1921, started a class for the instruction of these children; the first class contained 10 boys, was held at the Accrington Road Council School, and was taken by Miss Drummond, who, some years ago, was instructed in his methods by M. Leon

Berquand. The boys were examined at the beginning and at the end of the course by both Dr. Robertson and myself. I never before had heard such a group of terrible stammerers, and the result six weeks later was very remarkable. The following table will give some idea of what was achieved :—

Table 6.

Name.	Age.	Duration of Stammer.	Result.	Remarks.
C.A.	13 yrs.	9 yrs.	Occasionally stumbles over T and D : otherwise cured.	Recommended for second course.
H.H.	11 yrs.	1 yr.	Cured.	
G.H.	10 yrs.	7 yrs.	Cured.	} Twins.
R.H.	10 yrs.	3 yrs.	„	
W.R.	14 yrs.	10 yrs.	Occasional hesitation only.	Recommended for second course.
L.B.	12 yrs.	7 yrs.	Cured.	
F.M.	10 yrs.	3 yrs.	Cured.	
H.C.	11 yrs.	9 yrs.	Very much improved ; body movements and mental excitement on trying to speak have gone.	Recommended for second course.
H.L.	11 yrs.	9 yrs.	Cured.	
G.A.C.	11 yrs.	9 yrs.	Cured.	Examined in school three months later stammer returning.

The three boys recommended for a second course all appeared to be quite cured at the end of it. The results in the second class were equally satisfactory, and the only point for investigation is whether or not the results will be permanent. The children will all be re-examined from time to time and a further report on them will be made next year.

INFECTIOUS DISEASES.

The following Table shows the total number of cases of the infectious diseases mentioned which were notified or reported in the borough and the number of those which occurred amongst school children. As measles, whooping-cough, chicken-pox, and mumps are not compulsorily notifiable, the total number of cases

is not known. Information as to these diseases is obtained from the Teachers, Health Visitors and School Attendance Officers.

Disease.	Total Number known in the whole Borough.		Number occurring amongst School-children.	
	1921	1920	1921	1920
Scarlet Fever	211	182	153	128
Diphtheria	45	69	21	43
Enteric Fever	2	5	—	—
Measles	57	1446	54	1435
Whooping-cough	360	17	351	14
Chickenpox	247	244	243	239
Mumps	75	57	75	57

There was a small outbreak of scarlet fever at St. James' School, Guide, otherwise there was no undue prevalence of this disease in any school; it is noteworthy that the schools attended by the poorest children have a lower incidence of scarlet fever than those regarded as "better class" schools. The following schools were closed because of excessive prevalence of the diseases mentioned :

WHOOPING-COUGH.

<i>School.</i>	<i>Period.</i>
Mill Hill Council, Infants..	June 14th, 1921, to July 4th, 1921.
Witton Infants.. .. .	" " " "
Christ Church, Infants ..	June 24th, 1921, until the end of the Summer Holidays, viz., 15th Aug.
Bangor Street, Infants ..	June 30th, until the end of the Summer holidays.
St. Silas', Infants	July 4th, until the end of the Summer holidays.

MEASLES.

Cedar Street, Infants ..	June 30th, until the end of the Summer holidays.
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MUMPS.

St. John's, Infants	July 6th, until the end of the Summer holidays.
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VACCINATION. In view of the increasing prevalence of small-pox, the decrease in the number of vaccinations performed is a serious menace to the community. The entrants were unvaccinated to the number of 60% of the boys and 65·9% of the girls ; 45·6% leaving boys and 44·1% leaving girls were unvaccinated.

FOLLOWING UP.

The arrangements for following up are the same as those described in last year's Report. During the year the School Nurses paid 5,145 home visits, 3,210 to urge medical treatment, and 1,935 to give advice about uncleanness. It may be mentioned here that the School Nurses assisted the Medical Inspectors in school for 282 sessions, and at the inspection clinic for 132, the Dentist in school for 94 sessions, and at the dental clinic for 208. They assisted the Ophthalmic Surgeon on 97 occasions and treated children at the Minor Ailments Clinics for 503 sessions.

In order to link up our work more closely with that of the School Attendance Department, and so that the teachers can have information regarding their pupils who are attending clinics, a clinic attendance card, giving the exact time and place is now issued to every child recommended to attend a clinic. The doctor, dentist, or nurse, records the attendance on the card, and states the time the child left in cases where he or she is proceeding to school from the clinic. If the child is unfit to attend school this is stated. The card also indicates the time when the child is to re-attend, should this be necessary. On return to school the card is shown to the teacher, who initials it.

The Authority provides treatment for defects for which otherwise the provision is inadequate. Treatment is limited to those whose parents cannot afford to obtain it privately. A list of the clinics, and where and when held, is given on page 7.

MINOR AILMENTS. The following Table gives particulars of the cases of minor ailments dealt with during the year :—

TABLE IV_A. TREATMENT OF MINOR AILMENTS.

Disease or Defect.	Number of Children.				
	Referred for treatment during 1921 and those outstanding from 1920.	Treated.			Not Treated at end of Year.
		Under Local Education Authority's Scheme.	Other-wise.	Total.	
SKIN—					
Ringworm—Head	98	75	14	89	9
Body	19	10	3	13	6
Scabies	69	3	66	69	—
Impetigo	451	218	219	437	14
Minor Injuries	18	14	4	18	—
Other Skin Diseases	99	13	74	87	12
Ear Disease	148	94	36	130	18
Eye Disease (external and other)	183	117	43	160	23
Miscellaneous.....	535	138	383	521	14
TOTAL	1,620	682	842	1,524	96

It will be seen that 682 cases, or 42%, received treatment at the Authority's clinics.

The following Tables show that 544 cases were dealt with during the year at the Town Hall, and 138 at Bolton Road :—

Table 7.

TOWN HALL TREATMENT CLINIC.

Disease.	Brought Forward from 1920.	No. of New Cases.	No. of Attend-ances.	Average Number of Attend-ances before fit for School.	Still attend- ing at end of Year.	Number excluded from School
Ringworm—Head...	8	55	948	22·0	3	All.
Ringworm—Body ..	—	9	104	12·0	3	„
Impetigo	1	174	1417	13·8	4	„
Blepharitis	1	57	1213	5·5	4	2
Other Eye Diseases..	—	6	155	—	—	None.
Conjunctivitis	—	28	448	26·8	12	3
Ear Discharge	—	59	1352	11·5	10	10
Wax in Ears.....	—	10	32	—	—	None.
Seborrhœa	—	1	58	89	—	All.
Scabies.....	—	2	23	53	—	„
Sores—Head....— (Vermin)	1	75	245	4·6	2	„
Sores—Body.....— (Vermin)	—	5	7	4	—	None.
Minor Injury,,.,.,.,.	—	4	24	—	—	„
Miscellaneous	—	48	646	18	6	11
TOTAL	11	533	6672		44	

Table 8.

BOLTON ROAD TREATMENT CLINIC.

Disease.	No. of New Cases.	No. of Attendances.	Average Number of Attendances before fit for School.	Still attending at end of Year.	Number excluded from School.
Ringworm—Head....	12	368	30·5	2	All.
Ringworm—Body....	1	41	42	1	1
Impetigo	43	368	13·2	4	All.
Blepharitis	19	151	22·6	2	3
Conjunctivitis	6	79	23	2	2
Ear Disease	14	424	34·25	6	4
Wax in Ears	11	46	—	—	None.
Seborrhœa	1	7	19	—	1
Scabies.....	1	75	58	—	1
Sores—Head— (Vermin).....	11	62	6·1	—	All.
Minor Injury.....	2	19	—	—	None.
Miscellaneous.....	17	215	16	3	3
TOTAL	138	1855		20	

Before these clinics were started it was found that many children remained out of school for prolonged periods because of minor diseases of the skin, eye or ear, which could have been cured in less than half the time if they had been under regular medical treatment. Generally in these cases no doctor was ever seen, though in a few the child was taken to a doctor once or even twice, and the ointment or whatever the doctor prescribed, was applied irregularly and often inadequately. Daily treatment is now given by a trained nurse, under the supervision of the School Medical Officer, and if the child does not attend regularly he is followed up at home by a School Attendance Officer. The subsidiary clinic at Bolton Road was started owing to the large number of attendances at the Town Hall, and the distance that some of the children had to come ; other subsidiary clinics in the suburbs may be found to be necessary later. The average daily attendance at the Town Hall Clinic was 23, and at 119, Bolton Road, 8.

The following Table shows the period of exclusion required for *all* cases of the diseases mentioned. It is interesting to note that the average period of exclusion for cases of ringworm of the scalp treated at the clinic was 40·4 days, of the non-clinic cases 57·4 days, and it should be noted that the cases not recommended to the clinics are those whose parents could afford private medical treatment, and who, one would expect, would be anxious to secure the return to school of their children as soon as possible.

LOSS OF SCHOOL ATTENDANCES

THROUGH EXCLUSION OF CHILDREN SUFFERING FROM MINOR AILMENTS.

The following Table shows, for the year 1921, the number of school children suffering from Minor Ailments requiring exclusion from school and the number of days (including Saturdays, Sundays and School holidays) those children were excluded during the year :

Table 9.

Disease.	No. of Cases Brought Forward from 1920.	Total No. of Children excluded.	No. of days excluded.	No. of Cases on books at end of Year.
Ringworm—Head.....	16	98	4704	9
Ringworm—Body.....	—	19	432	6
Scabies.....	10	69	2768	—
Impetigo	31	277	6703	14
Verminous Conditions.....	13	414	5171	8
Ear Discharge	—	15	428	18
Eye Diseases	2	13	369	23
Other Skin Diseases	4	57	1354	12
Miscellaneous.....	—	46	733	6
Total.....	76	1009	21883	96

The average period of exclusion, for each disease, of children re-admitted to school during the past two years is shown below, and indicates for most diseases a considerable improvement :—

					<i>Average period of exclusion.</i>	
					1921	1920
Ringworm, Head	..	..	..	..	44·8 days.	58·8 days.
Ringworm, Body	..	..	..	..	22·7 „	31·0 „
Scabies	..	..	..	..	40·1 „	60·5 „
Impetigo	..	..	..	..	22·8 „	22·7 „
Verminous Conditions	..	..	..		12·5 „	7·8 „
Eye Diseases	..	..	..	..	28·5 „	68·0 „
Other Skin Diseases		..	..	..	24·0 „	19·2 „
Ear Diseases	..	..	..	..	28·5 „	—
Miscellaneous	..	..	..	..	16·0 „	—

Owing to the comparatively successful treatment by ointment of ringworm of the scalp at the clinics, it was unnecessary to refer any case to the Blackburn and East Lancashire Royal Infirmary, where arrangements have been made for children recommended by the School Medical Officer to receive treatment for ringworm of the scalp by X-rays.

VISUAL DEFECT. The following Table shows that of 752 children with defective vision referred for treatment 505 were examined with a view to the prescription of spectacles, though in 49 of these the glasses were not prescribed by a medical man.

TABLE IV.B. TREATMENT OF VISUAL DEFECT.

Referred for Refraction.	SUBMITTED TO REFRACTION.				NUMBER OF CHILDREN.				
	Under Local Education Authority's Scheme at Clinic.	By Private Practitioner or Hospital.	Otherwise	Total	For whom Glasses were prescribed.	For whom Glasses were provided.	Recom- mended for treatment other than by Glasses.	Received other forms of treatment.	For whom no treat- ment was considered necessary.
752	452	4	49	505	470	376	20	20	66

Owing to the great arrears in this branch of the work the Ophthalmic Surgeon, Dr. Barrie Brownlie, and later, Dr. Wishart, who acted for him, attended for two sessions weekly from February 3rd, 1921. The number of children awaiting examination for glasses at the end of 1921 was 247, compared with 286 at the end of 1920, but the position is more satisfactory than appears at first sight, when it is borne in mind that these include 14 children undergoing treatment at the clinic, nearly 100 children for whom an appointment was made at the clinic, but who did not attend, and 111 who attended once but never returned. Considerable administrative difficulty is caused by these two latter groups, as the Ophthalmic Surgeon can only examine a limited number each session, and the number who fail to attend varies week by week. A larger number are now being summoned to the clinic, and when they all keep their appointments overcrowding takes place. In order to overcome the difficulty caused by children who did not return for full examination and prescription of glasses after atropin drops had been prescribed, we have now arranged to use homatropin in order to dilate the pupil on the occasion of the child's first attendance at the clinic, and the error of refraction is measured by the Ophthalmic Surgeon before the child leaves the building. Another great difficulty is to ensure that our time and energy are not wasted either by the parents not buying the spectacles prescribed or by the children not wearing them. During the year 417 prescriptions were issued at the Ophthalmic Clinic, but by the end of January, 1922, only 325 pairs of spectacles had been obtained. Twenty-two cases had been outstanding more than six months. The School Attendance Officers use their best endeavours to persuade the parents to buy the glasses, and weekly instalments are received towards them. In only one case has there been a definite refusal to buy the glasses; in all the others temporary unemployment is given as the reason for the delay. During the year 41 pairs were supplied free and 37 at less than cost price to children whose parents were necessitous. The total cost of the spectacles was £11 9s. 9d., of which £1 15s. 0d. was, during the year, recovered from the parents. We must depend on the teachers to see that children wear the glasses prescribed for them, and I note with pleasure that in many schools special attention is paid to this.

The following is the statistical report on the 654 cases seen at the Ophthalmic Clinic :—

The total number of children seen at the Ophthalmic Clinic in the course of the year was 654, which compares with 194 seen in 1920. Apart from the 612 new cases there were 36 for whom glasses had been prescribed in previous years who had come for their eyes to be re-tested, and six old cases of external eye disease who re-attended during 1921. Of the 612 new cases, 532 were referred from the routine inspections; the others were sent by private doctors or school teachers. The total number of attendances at the Clinic was 1,289, compared with 407 in 1920. The principal defects from which the new cases suffered were :—

Table 10.

EYE DISEASES.	Discharged after appropriate treatment.	Under treatment 31st December, 1921.
Blepharitis	4	—
Phlyctenular Conjunctivitis..	3	5
Nebulæ	9	—
Other Eye Diseases.....	14	—
	30	5
EXAMINED FOR REFRACTIVE ERRORS—		
Emmetropia (normal vision)....	22	—
Simple Hypermetropia (long sight)	41	—
Simple Hypermetropic Astigmatism	174	—
Compound Hypermetropic Astigmatism	30	—
Mixed Astigmatism.....	83	—
Myopia (short sight).....	40	2
Compound Myopic Astigmatism	62	2
Retinoscopy not taken and uncompleted cases.....	—	10
	452	14
	482	19
Cases of refractive error who received atropin but did not return for glasses to be prescribed.....	111	

Seventy-four of the above-mentioned children suffered from convergent and one from divergent squint, and eight of those with refractive error suffered also from nebulæ. Seventy-seven cases re-attended to see whether or not their glasses were satisfactory,

and 20 re-attended to have their vision re-tested, after having worn spectacles for six or more months ; in three of these a new prescription was necessary. Over 100 children who were invited to attend the Clinic failed to do so. In cases where the vision is very bad and a further invitation is neglected, reference will be made to the National Society for the Prevention of Cruelty to Children.

SERIOUSLY DEFECTIVE VISION. In 69 of the children for whom glasses were prescribed at the Clinic the error of refraction was over five dioptries—a very serious amount.

TONSILS AND ADENOIDS. The scheme described on Page 34 of my Report for 1920 has been in operation throughout the year. The only material alteration is that the Committee of the Blackburn and East Lancashire Royal Infirmary found it necessary in June to increase the fee from £1 1s. 0d. to £1 11s. 6d. per case. The following Table shows that including those awaiting operative treatment for adenoids and enlarged tonsils at the beginning of 1921 the total number referred for treatment was 218, of whom 167 received treatment, leaving only 51 awaiting treatment at the end of the year, compared with 95 at the beginning, and of the 51, 20 had been offered treatment, but it was not taken advantage of.

TABLE IV.c.

TREATMENT OF DEFECTS OF NOSE AND THROAT.

Referred for Treatment.	NUMBER OF CHILDREN RECEIVED OPERATIVE TREATMENT.			Received other Forms of treatment.
	Under Local Education Authority's Scheme.	By Private Practitioner or Hospital.	Total.	
218	136	18	154	13

There have been 14 operating mornings. One hundred and seventy-nine children were invited to attend for preliminary examination on the preceding day ; 159 attended, of whom 139 were passed as fit for the operation. In 11 it was thought that non-operative treatment might suffice to cure the condition ; in one the operation was not advised because the patient had heart disease, and in eight the operation was postponed temporarily:—four because the children's temperatures were raised, two because the children

had whooping-cough, one rheumatism, and one inflammation of the nose. Three of the children developed "a cold" in the 24 hours following the examination, and the operation was postponed on the advice of the Surgeon. The operations were performed by Dr. Barrie Brownlie or by Dr. Wishart, and the anæsthetic used was ethyl chloride. In the great majority of the cases both adenoids and enlarged tonsils required removal. One hundred and thirty of the children were taken home by their parents a few hours after the operation; it was necessary to detain three until late in the evening; one was retained as an in-patient for one night and two for two nights. All were visited at home after the operation and invited to attend a course of breathing exercises taken by the Organiser of Physical Training: 76 did so.

WORK OF DENTIST. Miss Mackinnon, L.D.S., took up her duties on the 1st March, 1921, and with the exception of eight sessions devoted to dental work under the Tuberculosis, and one under the Maternity and Child Welfare Scheme, she spent all her time in examining and treating school children. She has presented the following report:—

"As in other large towns in England, the condition of the children's teeth is extremely bad, fully 88% of those examined in the age groups five, six, seven and eight years suffering from caries, and in many cases mouths were in a very septic state. Unfortunately, in most bad cases of oral sepsis, the parents refused treatment, and obviously it was this neglect to have the condition remedied that had allowed the mouths to get into this state.

Of those referred for treatment, 1618 or 61·8% consented to be treated at the Clinie, and 345 or 12·8% agreed to have private treatment, making a total of 1,962, or 74·6%. 312 or 11·9% definitely refused treatment, and in 339 consent for treatment has not yet been obtained, although it has not been refused.

A great many of the parents have expressed their satisfaction at the establishment of a Dental Clinie, as they are glad of the opportunity to have their children's mouths made healthy.

The aim of the clinic is to ensure that the children treated shall have sound permanent dentures, by conservative work where caries has already attacked permanent teeth, and by removing septic teeth as a prophylactic measure.

My thanks are due to the teachers for their help during inspections, and to the School Nurses for the efficient manner in which they have carried out their duties.

The information required by the Board of Education is given in the following Table :—

TABLE IV,_D.—TREATMENT OF DENTAL DEFECTS.
1. NUMBER OF CHILDREN DEALT WITH.

	AGE GROUPS.										Specials.	Total.
	5	6	7	8	9	10	11	12	13	14		
(a) Inspected by Dentist .	869	1455	1568	1253							145	5290
(b) Referred for Treatment	2614										145	2759
(c) Actually Treated.....	949										145	1094
(d) Re-treated	None											

2. PARTICULARS OF TIME GIVEN AND OF OPERATIONS UNDERTAKEN.

No. of half days devoted to Inspection.	No. of half days devoted to Treatment.	Total No. of attendances made by the Children at the Clinic.	No. of Perm. Teeth.		No. of Temp. Teeth.		Total No. of Fillings.	No. of Administrations of Gen. Anæsthetics	No. of other Operations.
			Ex-tract'd	Filled.	Ex-tract'd	Filled.			
93	204	1658	144	530	2223	10	540	22	30

Appointments to attend the clinic for treatment were made to the number of 2,248. One thousand, five hundred and thirteen,

or 67·8% were kept, and as this is the first year, the result may be considered satisfactory. One hundred and forty-five “casual” cases were treated; these are children not previously inspected by the dentist who were sent by school teachers or others because of toothache.

Table 11.

STATISTICS RELATING TO INSPECTION BY THE DENTIST.
NUMBER EXAMINED.

Sex.	Year of Birth.	Number examined.	All teeth sound.	% All teeth sound	No. with more than five temporary teeth decayed.	% more than five temporary teeth decayed.	% with no permanent teeth	% with permanent teeth sound	% with carious permanent teeth
B.	1916	429	91	21·2	146	34·0	90·4	9·3	0·2
G.	1916	440	100	22·7	126	28·6	85·9	13·6	0·4
B.	1915	690	100	14·4	287	41·5	50·0	43·0	6·9
G.	1915	765	113	14·6	305	39·8	46·1	45·6	8·2
B.	1914	767	77	10·0	300	39·1	13·0	61·6	25·2
G.	1914	801	73	9·0	427	53·3	8·5	60·5	30·9
B.	1913	660	33	5·0	324	49·0	0·3	57·7	41·9
G.	1913	593	28	4·7	273	46·0	—	50·9	49·0

Total Number of Children Inspected	5,145	
Number of Children with dental caries	4,530	or 88·04%
„ „ advised to have treatment	2,614	or 50·8 %
„ „ not requiring treatment	2,531	or 49·2 %
„ parents present at inspection.....	939	or 18·25%
„ consents for treatment at clinic.....	1,618	or 61·8 %
„ who prefer private treatment	345	or 12·8 %
„ „ definitely refused treatment.....	312	or 11·9 %
„ still undecided about treatment	339	or 12·9 %

The following Table gives further details of the treatment carried out during 1921.

Table 12.

DENTAL TREATMENT.

Number of Children.	PERMANENT TEETH.			TEMPORARY TEETH		Local Anaesthetics. used.
	Ex-tracted.	Filled Cement.	Filled Amal-gam.	Ex-tracted.	Filled Cement.	
Inspected Cases 1513	90	6	520	1882	10	1001
Casual Cases ... 145	54	—	4	341	—	141

Altogether 949 mouths were made healthy, a very gratifying result. During 1922, children aged five years will be inspected for the first time, and all the children aged six, seven, eight or nine years will be re-inspected.

REMEDIAL EXERCISES CLINIC. This is in charge of Miss Ida Holmes, Organiser of Physical Training. The first clinic in breathing exercises was held on the 24th January, 1921, and between then and the 28th November, when the Swedish Remedial Clinic was started, there were 69 sessions. The post-operative cases showed a marked improvement after only a few attendances; in ten cases an endeavour was made to cure the condition without operation, and of the five who persisted with the treatment three appeared to be cured.

Only eight sessions were held for the treatment of deformities. Six children with spinal curvature attended regularly; in two cases further attendance is no longer necessary, and the other four all show substantial improvement. The attendances were:—

Breathing Exercises	263
Deformities	93

TOTAL	356
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SUMMARY.

The following Table gives particulars of all cases referred for treatment during 1921, and shows the number actually treated:—

TABLE V.
SUMMARY OF TREATMENT OF DEFECTS.

Disease or Defect.	No. of Children				
	Referred for Treat- ment.	Treated.			Un- treated.
		Under Local Auth- ority's Scheme.	Other- wise.	Total.	
Minor Ailments	1620	682	842	1524	96
Visual Defects	752	452	53	505	247
Defects of Nose and Throat...	218	136	31	167	51
Dental Defects	3220	1094	29	1123	2097
Other Defects	506	—	327	327	179
TOTAL	6,316	2,364	1,282	3,646	2,670

The 506 children with "other defects" suffered from diseases such as bronchitis, rheumatism, heart disease and nervous disease, and were referred to their doctors or to the Infirmary for treatment. Three hundred and twenty-seven were known to have obtained medical treatment, but the others could not be persuaded to do so.

Although the Table shows that the large number of 2,670 were untreated, for the great majority of these cases treatment is available and in many cases has been offered. With our present methods of following up this number should be largely reduced before the end of 1922.

BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

During the year an effort was made to obtain information relating to all the exceptional children in the area. The following gives the information desired by the Board of Education :—

TABLE III.

NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA IN 1921.

			Boys	Girls	Total
BLIND — including partially blind) within the meaning of the Elementary Education (Blind and Deaf Children Act, 1893).	Attending Public				
	Elementary Schools	...	8	12	20
	Attending Certified				
	Schools for the Blind	...	2	3	5
	Not at School	...	1	1	2
DEAF AND DUMB (including partially deaf) within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.	Attending Public				
	Elementary Schools	...	—	—	—
	Attending Certified				
	Schools for the Deaf	...	4	5	9
	Not at School	...	1	—	1

TABLE III.—Continued.

			Boys.	Girls.	Total	
MENTALLY DEFICIENT.		Attending Public Elementary Schools	...	6	9	15
		Attending Certified Schools for Mentally Defective Children	...	36	21	57
	Feeble Minded	Notified to the Local Control Authority by Local Education Authority during the year	...	2	—	2
		Not at School	...	—	—	—
	Imbeciles	In Institutions	...	4	—	4
		At School	...	—	—	—
		Not at School	...	6	1	7
	Idiots	...	—	—	—	
EPILEPTICS.		Attending Public Elementary Schools	...	4	—	4
		Attending Certified Schools for Epileptics	...	—	—	—
		In Institutions other than Certified Schools	...	—	—	—
		Not at School	...	1	1	2
PHYSICALLY DEFECTIVE.		*Attending Public Elementary Schools	...	17	12	29
	Pulmonary Tuberculosis	Attending Certified Schools for Physically Defective Children	...	—	—	—
		In Institutions other than Certified Schools	...	7	1	8
		Not at School	...	6	9	15
	Crippling due to Tuberculosis	*Attending Public Elementary Schools	...	9	7	16
		Attending Certified Schools for Physically Defective Children	...	—	—	—
		In Institutions other than Certified Schools	...	11	3	14
		Not at School	...	8	3	11

* Including Open-air Classes.

TABLE III.—Continued.

			Boys.	Girls.	Total.
Crippling due to causes other than Tuberculosis, <i>i.e.</i> , Paralysis, Rickets, Traumatism	Attending Public Elementary Schools	...	43	27	70
	Attending Certified Schools for Physically Defective Children	...	—	—	—
	In Institutions other than Certified Schools	...	—	—	—
	Not at School	...	10	4	14
	Working (under 16 years but over 14 years).		10	4	14
Other Physical Defectives <i>e.g.</i> (a) delicate and other children suitable for admission to Open-Air Schools.	Attending Public Elementary Schools	...	16	37	53
	Attending Open-Air Schools.	...	29	36	†65
	Attending Certified Schools for Physically Defective Children, other than Open-Air Schools.	...	—	—	—
	Not at School.	...	—	—	—
(b) Children suffering from severe heart disease	Not at School	...	5	2	7
	At School.	...	14	19	33
*Dull or Backward	...	Retarded 2 or more years..	918	752	1670

†Altogether there are 77 children in the open-air classes ; the other 12 are included in this table under other headings, *e.g.*, tuberculosis, and other forms of crippling.

*It includes children in standards or classes between Class II in the Infants' Schools, and Standard V in the Senior Schools, who are two standards or more below their correct positions, according to the age normal.

The next Table compares the percentages of exceptional children in Blackburn with those for the whole country. It will be seen that for most of the conditions our cases are less numerous than in England and Wales as a whole.

Table 13. RETURN OF EXCEPTIONAL CHILDREN.

Population (1911 Census).		Blind (includ- ing par- tially blind.	Deaf & Dumb (includ- ing par- tially deaf).	MENTALLY DEFICIENT.				PHYSICALLY DEFECTIVE.			
				Feeble- Minded.	Imbe- ciles.	Idiots.	Epilep- tics.	Pulmon- ary Tu- bercu- losis.	Crip- pling due to Tuber- culosis.	Crip- pling due to causes other than Tuber- culosis.	Other Physical Defec- tives.
36,189,685	ENGLAND & WALES, 1920. No. of Children ... Percentage of Popu- lation ...	5813 ·016	6195 ·017	30925 ·085	4910 ·014	949 ·003	6637 ·018	20020 ·055	12919 ·036	22909 ·063	53134 ·147
133,052	BLACKBURN, 1921. No. of Children ... Percentage of Popu- lation ...	27 ·020	10 ·008	74 ·055	11 ·008	figures. incom- plete.	6 ·004	52 ·039	41 ·030	98 ·073	158 ·118

BLIND CHILDREN. The 20 children attending public elementary schools who are mentioned in the Table are partially blind ; most of them are suffering from high myopia. Special provision is necessary for the education of these children, as the curriculum of an ordinary school makes their vision worse. The blind boy who is not at school is awaiting admission to an institution ; the girl is undergoing a course of tuberculin treatment.

DEAF CHILDREN. The deaf boy who is not at school suffers also from epilepsy, and he will not be accepted in a school for the deaf and dumb.

The Rev. J. E. Samuel, Chairman of the School Attendance Reference Sub-Committee, and the School Medical Officer, visited during 1921 all the special schools in which Blackburn children are being educated, and reported to the Education Committee their satisfaction at the provision made for the children.

MENTALLY DEFECTIVE CHILDREN. The model arrangements of the Board of Education for carrying out the provisions of the Elementary Education (Defective and Epileptic Children), and the Mental Deficiency Act, have now been adopted in Blackburn. Notification has been sent to the Lancashire Asylums Board, the Local Authority under the Mental Deficiency Act, of all imbeciles known to us, and of two feeble-minded children who left the Regent Street Special School on attaining the age of 16 years. All the mentally defective children have been visited at home either by a School Nurse or by an officer of the Central Lancashire Branch of the National Association for the care of the Feeble-minded.

There are 36 boys and 21 girls attending the Regent Street Special School. Nine were admitted during the year and two discharged. Four of the admissions were low grade feeble-minded ; four were higher grade cases, who are making satisfactory progress, and one has since been transferred to a school for the Deaf and Dumb. The following Table gives particulars of the present condition of the 143 children discharged from the Regent Street School since 1910. It has been prepared by Miss Clayton, the Head Mistress of the School :—

Table 14.

ANNUAL RETURN OF THE AFTER-CAREERS OF CHILDREN FORMERLY
ATTENDING SPECIAL SCHOOLS.

		REGENT ST. SPECIAL SCHOOL	
		Boys.	Girls.
1.	No. of children who have left the School since 1910	99	44
2.	No. who—		
	(a) Have since died	9	1
	(b) Are known to be incapable by reason of mental defect of undertaking employment	4	3
	(c) In attendance at an Institution for further education	2	3
	(d) Are in other Institutions	4	—
3.	No. employed in—		
	(a) Industrial or manual occupations	59	20
	(b) Agricultural or rural occupations	3	—
	(c) Domestic occupations (including those who are helping in domestic work at home)	2	9
	(d) Commercial, professional, or clerical work	2	—
	(e) "Blind Alley" or precarious occupations	5	—
4.	No. who have left the neighbourhood, or whose after-careers have not been traced	9	8

In most cases the exact earnings of the children are not known, but five boys are stated to earn between £2 and £3 per week, 40 boys and 16 girls between £1 and £2, and 24 boys and seven girls from 10/- to 20/-.

EPILEPTICS. The problem of epilepsy in an elementary school child is a grave one, even if the fits are infrequent. The presence of such a child in a class causes considerable apprehension to all the other scholars who have ever before seen a fit. Apart from

the financial difficulty of securing admission to a colony for the epileptic, the available accommodation appears to be small. In both the cases not at school several fits occur each day.

PULMONARY TUBERCULOSIS. It is known that there are in the town 52 cases of notified tuberculosis of the lungs in school-children. At the end of the year 22 were attending ordinary elementary schools, seven were in open-air classes, eight in the Queen's Park Sanatorium of the Blackburn Board of Guardians, and 15 were not at school. All these children are examined periodically by either the Tuberculosis Officer or by an Assistant School Medical Officer.

CRIPPLING DUE TO TUBERCULOSIS. All cripples are kept under the supervision of Dr. Robertson, who has provided the figures here submitted :—

TUBERCULOSIS CRIPPLES number 41, only 16 of whom are able to attend an ordinary school ; 14 are in the Queen's Park Sanatorium, and 11 are at home receiving no education. The parts affected are :—

Hip	16
Spine	14
Knee	9
Elbow	1
Wrist	1
	—
TOTAL "	41
	—

It is not sufficiently realised that all these cases are caused by infection, generally by the consumption of tuberculous milk.

NON-TUBERCULOUS CRIPPLES. All the cripples have now been reported upon and most of them have been visited at home by Dr. Robertson. The number recorded as attending school has been reduced from 126 last year to 70 now. Eleven have removed from the district ; two have died ; 11 are now over 16 years of age ; in 19 the condition has been remedied, and in the other cases re-classification has transferred them to other groups, for example, " heart disease," " tuberculous cripple," etc.

The causation of the crippling is:—infantile paralysis, 30 ; congenital and birth palsies or deformities, 5 ; rickets, 24 ; accidents, 9. Four of the infantile palsy cases are not really fit to attend an ordinary school, but in the absence of a special school for the physically defective it is the only place where they can obtain any education. Of the 14 cases not at school three are mentally normal but cannot be conveyed to school ; in the other 11 the crippling is complicated by mental deficiency or epilepsy.

OTHER PHYSICALLY DEFECTIVES. The figures in Table III indicate that there are at least 53 children, suitable for education, in an open-air school, who are attending ordinary elementary schools.

OPEN-AIR EDUCATION.

The three open-air classes continue to perform excellent work ; at the end of the year 77 children were in attendance. The Education Committee have decided to establish another class in the Corporation Park, and it was opened in January, 1922. The principal conditions for which the children were admitted are :—

Anæmia	..	..	..	..	..	..	..	18
Bronchitis	..	..	..	..	..	..	..	13
General Debility	..	..	..	..	..	..	..	10
Pulmonary Tuberculosis	..	..	..	..	..	..	..	7
Tuberculous Glands	..	..	..	..	..	..	..	8
Other Tuberculous Conditions	..	..	..	..	..	..	..	3
Chorea	..	..	..	..	..	..	..	3
Heart Disease	..	..	..	..	..	..	..	3

The following Table gives information concerning admissions to and discharges from the classes :—

Table 15.

On Register 31st Dec., 1920.	Admitted during 1921.	No. dis- charged during 1921.	On Register 31st Dec. 1921.	Average duration of Attendance of those Discharged.	Av'age increase in weight of those Discharged.
BANGOR STREET CLASS.					
25	25	27	23	12·1 months.	6·8 lbs.
ACCRINGTON ROAD CLASS.					
25	14	12	27	14·3 months.	8·0 lbs.
CORPORATION PARK CLASS.					
26	20	19	27	13·0 months.	6·7 lbs.
76	59	58	77		

The Health Committee have under consideration the establishment of a residential open-air school at the Corporation Hospital, and when the financial position has improved will probably proceed with it.

PHYSICAL TRAINING.

In accordance with a request of the Board of Education the following report by Miss Holmes, Organiser of Physical Training, is included here :—

“ At the present time four Physical Training Centres are provided ; an additional one at St. Thomas’s Memorial Hall having been started during the year. They are attended by children from Standard I upwards from the schools where there are no Central Halls, or suitable playgrounds—21 in number. About a quarter of these lessons are taken by the Specialist Staff, and the remaining lessons by the class teachers in attendance from the schools. The children in general receive two other lessons of 20 minutes each per week, and in many schools an additional period of 20 or 40 minutes.

Four playing-fields for organised games have been used by children attending eight of the Public Elementary Schools. An additional playing-ground was opened on November 1st for the use of five schools in the centre of the town. During November, 1921, evening classes for physical exercises were held for Public Elementary School Teachers, over 200 attending. At the same time an Organised Games Club for Public Elementary School Teachers was formed ; at present there are 40 members. During the summer months the senior children avail themselves in large numbers of the opportunities provided for swimming instruction at the baths.”

Annual sports are held in connection with the Public Elementary Schools, and with the Central Schools. The Schools’ Football Association supervised the football competition between the schools ; organised games are taken in all schools.

PROVISION OF MEALS.

The meals are cooked at the Mayson Street Centre and are distributed from there to the open-air classes, the Regent Street Special School, and to the Bent Street Centre, thus making, with Mayson Street, six centres at which meals can be partaken.

Dinners only are supplied and they are provided only on days when the schools are open. The children at the open-air classes and at the Special School all receive dinner and in all non-necessitous cases make a payment towards its cost. Necessitous cases recommended by Head Teachers, School Attendance Officers, or the School Medical Officer receive free dinners. Despite the fact that 1921 was a period of marked industrial depression the total number of necessitous cases requiring to be fed during the year was only 392, though this is a substantial advance on 1920, when the number was 52.

CO-OPERATION OF PARENTS.

A parent is invited to attend each routine inspection, either medical or dental, and in 31·6 of the medical inspections the invitation was accepted. This compares with 27·3 last year, and the increase is probably due to many of the mothers being out of work. A parent was present at 43·7% of the examinations of the entrants, 29% of the intermediates, and 19·3% of the leavers ; a parent attended at 34% of the examination of girls, and 29% of those of boys. At dental inspections the percentage of parents present was 18·5%. There were 12 objections to medical inspection compared with 15 last year. Four hundred and ninety-five parents were interviewed at the Town Hall Clinic with regard to the various defects from which their children were suffering.

CO-OPERATION OF TEACHERS.

It is a pleasure to record again the hearty co-operation of the teachers in our work. The officers of the School Medical Service endeavour to cause as little inconvenience as possible to the ordinary work of the school, and trust that their endeavours to improve the physique of the children are assisting materially the educational work by rendering the children more receptive of the teaching provided.

CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

Valuable assistance is given by the School Attendance Officers, under the able supervision of Mr. Duckworth. They follow up at home cases where attendance at the clinics is unsatisfactory and cases where spectacles are required. When they desire an opinion as to the fitness or otherwise of a child for school the case is referred to the inspection clinic ; 497 such cases were reported upon during the year.

INSPECTION CLINICS.

There have been 110 inspection clinics ; the average attendance at this clinic during the year was 27. The number of children who attended was 1,518, and the total number of attendances 2,995. The children were referred to the clinic by :—

School Attendance Officers		497
School Nurses		487
Teachers		458
Medical Inspector for further examination		76
TOTAL		1518

CAUSE OF ABSENCE FROM SCHOOL.

The Chief School Attendance Officer has, in response to a request from the Board of Education, analysed the exact causes of absence in a typical school. The Senior Department of St. Luke's School was taken during the three months September, October and November. The average number on the rolls during that period was 205, and the school was open for 119 sessions. The maximum attendance possible, therefore, was 24,395. There were 17 half-timers who lost 828 attendances ; including those, 2,114 attendances were lost, or 8·25%. Excluding the loss of attendance of the half-timers the absence amounted to 1,286 sessions, or 5·27% of the total. There were only 64 children who made a full attendance. The following Table shows the reasons given for the absences :—

Table 16.

CAUSE OF ABSENCE.	No. of children absent.	Attend- ances lost.	% of 24,395
"Sick and Bilious"	41	196	·803
Diarrhœa	6	16	·065
Bad Colds	35	280	1·14
Sore Throats	2	41	·16
Fever and Contact with Fever ..	7	243	1·00
Rheumatism	1	10	·041
Bronchitis	1	36	·14
Ear Disease	4	10	·041

Table 16.—Continued.

CAUSE OF ABSENCE.	No. of children absent.	Attend- ances lost.	% of 24,395
Eye Disease	3	10	·041
Skin Disease	3	45	·18
Visit to Dentist	5	24	·098
Scalded Foot	1	10	·041
“ Weakness ”	1	58	·23
Verminous Head	1	20	·082
Colic	1	3	·012
Ringworm	1	6	·024
Boils	1	11	·045
Adenitis	1	26	·106
Head Injury	1	2	·008
Death in House	3	17	·066
Parents ill, or with parents on holidays	31	203	·82
No Clogs	7	10	·041
Errands and lateness	9	9	·036
Half-time	17	828	3·9
		2114	8·25

It is interesting to note that more than half the loss, namely 1,067, out of 2,114 sessions, was occasioned by non-medical causes, but excluding “ half-time,” which will be abolished very soon, the greater part of the absence was due to illness.

CO-OPERATION WITH VOLUNTARY BODIES.

The arrangements described last year under which members of the After-Care Sub-Committee of the Juvenile Employment Committee follow up at home children who have left school with untreated physical defects have been put into operation. Mr. Lister, the Juvenile Employment Officer, has kindly sent me the following report on the 54 cases referred to him :—

Medical Attention received since leaving School.. ..	13
Not received treatment since leaving school and advised to obtain attention	9
Removal and cannot be traced	3
In hands of After Care Visitors	29

Co-operation with the Crippled Children's Aid Society and the National Society for the Prevention of Cruelty to Children is maintained. Over 80 were referred to the Society's Inspector, and in every case improvement resulted. The Crippled Children's Aid Society are preparing, in conjunction with the Blackburn Board of Guardians, an excellent scheme for the operative treatment of cripples.

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

This work is carried out in close co-operation with the Juvenile Employment Officer. During 1921 there were 1,583 total exemptions from school "for beneficial employment"; there were no partial exemptions from school attendance.

It has been found that reports made to the Juvenile Employment Officer on the physical condition of children about to leave school are unsatisfactory owing to the fact that the last medical examination has taken place some two years before the information is required. In order to overcome this difficulty an endeavour will be made during 1922 to examine the children during their last year at school; this will be in addition to the groups required by the code, namely, the entrants, the eight-year-olds, and the twelve-year-olds. This examination will be made specially with a view to determining whether or not any particular occupation is likely to be prejudicial to the child's health. The appropriate space on the "juvenile employment card" will be completed by the doctor at the time of the examination.

During 1921 thirteen special cases were referred to the School Medical Officer by the Juvenile Employment Officer as it appeared that the occupation desired by the child or its parents would be unsuitable. In six cases medical examination confirmed this opinion, and a more suitable opening was chosen.

Apart from the half-timers there is a considerable number of school-children who are employed out of school. At the end of the year 82 boys and three girls between the ages of 12 and 14 years were registered under the Bye-laws for two hours' work after school on a school day and five hours on Saturdays and school holidays. Seventy-three boys and five girls between these ages were registered for employment in the sale or delivery of milk or newspapers between 7 and 8 a.m. and 5 and 6 p.m. Thirty-four boys over school age were registered for trading in the streets.

All employed school-children are examined by the Assistant School Medical Officer whenever a routine inspection takes place at the school, and those registered for employment before school are all examined before the certificate is granted. Eleven girls and 178 boys were examined altogether. All were recommended for a certificate, with the exception of two boys, one of whom suffered from permanent paralysis of the right foot; the other boy was suffering from a fracture of the fore-arm, and a certificate was withheld temporarily in his case. Two boys admitted they were working for longer hours than allowed by the Bye-laws; their employers were warned by the Juvenile Employment Officer.

The licensing and inspection of children who take part in entertainments has received considerable attention. The dressing-rooms of the local theatres have been inspected on several occasions and reports issued to the Juvenile Employment Committee. The Juvenile Employment Officer has prepared the following notes :—

“ One license was granted for a period of six months in respect to a girl 10 years of age, residing in Blackburn, to take part in an entertainment carried on by her father and aunt. On the expiration of the license it was not renewed as the age at which children are to be licensed was raised from 10 to 12 years by the Education Act, 1918.

Fifteen girls from 10 to 13 years of age, residing and licensed in other towns were granted permission to take part in entertainments within the town for a period of one week. Six of the girls were accompanied by their mothers and three by elder sisters. In two groups of three and five girls the mother of one of the girls of each group acted as matron for the group. All the girls appeared healthy, bright and cheerful, and under proper guardianship, as will be seen from the above particulars. The lodgings were inspected by the Medical Officer of Health and found satisfactory.”

MISCELLANEOUS.

EXAMINATION OF SCHOLARSHIP WINNERS. The High School, 26; Bursary, 3; other Scholarships, 4; Total, 33,

DEATHS.

The deaths of 52 children of school age occurred during the year. Included are 11 from tuberculosis, 6 from accidents, 5 heart disease, 5 pneumonia, 3 appendicitis, 4 diarrhoea or food poisoning, 2 meningitis, 2 kidney disease, 1 each from scarlet fever, diphtheria and influenza, and 11 from other causes.

SECONDARY SCHOOLS.

At the request of the Governors of the High School and the Grammar School, medical inspection was for the first time offered to the scholars of those Institutions.

The suggestion of the Board of Education is that normally there shall be a full routine examination at the ages of 12 and 15 years and that there shall be an annual review of every scholar, the degree and extent varying according to the previous record and the other circumstances of the pupil. This year, as it was the first, every child was fully examined except in the cases where the parents objected to the examination. It is significant of the present-day relationship between children and parents that in several cases of objection to inspection the decision appeared to have been left to the children. At the Grammar School there were 25 refusals ; at the High School 40, and at the Crosshill Preparatory School 25. It is probable that next year these numbers will be very much reduced as the advantages of inspection will be better appreciated. It unfortunately does not follow, as some would believe, that because parents can afford private medical treatment that they themselves detect, and have treated, defects in their children such as those of the teeth, throat or vision, which are preventing them from taking full advantage of the education provided, and from developing into healthy men and women, well equipped both mentally and physically. It is noteworthy that the children of medical practitioners were not included amongst the objectors.

The boys of the Grammar School were examined by Dr. Robertson, and the scholars of Crosshill and the High School by Dr. Henry. I appreciate very much the excellent arrangements made by Miss Gardner and Mr. Holden for the conduct of the examinations and their invaluable help in securing treatment for the defects found.

The following are extracted from a report made by Dr. Henry .—

CROSSHILL SCHOOL.

“ Parents showed their interest by attending to the extent of 75% ; they were most appreciative when slight defects were pointed out to them, and anxious to have these remedied. The Head Mistress or her representative was present on each occasion and was most helpful.

The examination was exhaustive ; personal medical history and any family tendency to illness were fully discussed with parents. In those few cases where parents could not be present personal letters were written by the Head Mistress explaining any defects found.

Each child was stripped to the waist and thoroughly overhauled, any defect, however trifling, was noted. Of the 23 boys included in this examination 12 of them had defects—mostly of teeth, tonsils, or adenoids.

One hundred and nineteen girls were examined. Ten were undoubtedly overclad—several being found to be wearing six woollen garments, and one nine. There were 62 children with physical defects, chief amongst these being those of the teeth.

It was interesting to find that in one small class, grouped together because they were slightly backward, a defect of vision or hearing was observed in each case. Several of the latter defects were no doubt due to the presence of adenoids, and when these are remedied the children ought to stand an equal chance with the others.

There were 10 cases of heart disease, varying from slight symptoms, caused by a tendency to rheumatism, to organic lesions following fevers—all of them are being carefully watched for signs of overstrain in school. Seven cases of extreme nervousness were probably due to insufficiency of sleep and rest.

The important question of fresh air during sleep is one which seems to be little understood in this part of the country. The 12 cases of mouth breathers in this group were in children who are put to bed in a room with windows shut—the importance of nasal hygiene in the daily routine was impressed upon them.

The conditions which obtain at Crosshill are ideal for the welfare of the children. The school is situated in private grounds in the highest part of the town, off the main track, but within easy access from the tram route. The rooms are large and exceedingly well ventilated, and seem so arranged as to catch every ray of sunshine. It is to be hoped that a child who spends the greater part of the day in this school will demand similar conditions in her own home."

THE HIGH SCHOOL.

"Over 300 girls were examined and 78% of the parents attended. With reference to general nutrition more than 50% were excellent. Specially noticeable were the age groups 15—19 years, the physique of these girls, which in many cases left nothing to be desired, becomes markedly good as they advance in the school, and the majority of the elder girls carry themselves well. This is probably largely accounted for by the fact that, from their admission onwards, all possible attention and care is given by the gymnastic mistress and by the staff generally to the physical condition of all the pupils, that the system of gymnastics used is particularly beneficial to them, and that games (especially netball and tennis) are played under expert supervision, and are thoroughly enjoyed by all.

Sixty-eight per cent. in this group had no defects ; considering that this is the age (15—19) when most girls are working specially hard for examinations this is particularly good. Fifteen per cent. required treatment for teeth, and 10% had some defect in vision. One girl with a history of nervousness and overstrain was found to be almost blind, without being aware of any defect in vision. Spectacles have now been obtained and the improvement is already marked.

The age groups 11—13 years contained the most serious defects. Fifteen children required special remedial gymnastics ; one child was found to have serious valvular disease of the heart, necessitating rest from all games and exercises.

The rooms are satisfactory, being well lighted and well ventilated. On the staff of the Girls' High School is a most competent gymnastic mistress, Miss Broadbent. She was present at the

medical examination of the girls and the amount and nature of the gymnastic and other exercises requisite for each girl were discussed with her.

At both the High School and at Crosshill hot milk or cocoa, and biscuits, etc., can be had during recreation by those who wish for this refreshment, and an excellent hot mid-day dinner is provided at a small cost for those who desire to remain at school all day. At each school out-of-door games and other activities in the open air are considered important, and are always supervised."

THE GRAMMAR SCHOOL.

The percentage of parents present was 26. Defective vision was common ; 31 were wearing suitable glasses, and in another 44 glasses should have been worn owing to the seriousness of the visual defect. The condition of the teeth was good, speaking comparatively ; 53% had all their teeth sound, and only 8% had more than three bad teeth. In 36 of the 462 boys examined the nutrition was recorded as bad, this being the same percentage, 0·6, as in the elementary school-boys. The nutrition of 19% was reported to be excellent, compared with 7% amongst the elementary boys. Nose and throat defects were slightly more prevalent in the secondary scholars and would have been much more so had not 13 boys been previously cured of throat defects by operation. No case of tuberculosis was found. Thirteen boys were discovered to have slight lateral curvature of the spine.

In view of the large number of defects found in each of the schools it appears desirable that there should be a medical examination of prospective entrants so that the children may receive treatment before admission.

The following Tables give for the more important defects a comparison between the results of the examinations in the elementary and the secondary schools. The comparisons cannot, however, be carried far as the numbers are so small that "chance" largely affects the percentages :—

Table 17.

BOYS.

AGES EIGHT YEARS AND OVER.

DEFECTS.	ELEMENTARY SCHOOLS				SECONDARY SCHOOLS.			
	No. of Children Inspected, 1,807.				No. of Children Inspected, 469.			
	No. referred for treat- ment.	No. referred for ob- serva- tion.	Total	% Defec- tive.	No. referred for treat- ment.	No. referred for obser- vation	Total	% Defec- tive.
Malnutrition... ..	4	—	4	0·2	—	3	3	0·6
Skin and Hair ...	67	4	71	3·9	6	1	7	1·5
Teeth	258	—	258	14·2	37	—	37	7·9
Adenoids and En- larged Tonsils ...	41	12	53	3·0	13	6	19	4·0
Enlarged Cervical Glands	—	1	1	0·05	—	—	—	—
External Eye Dis- eases	15	1	16	0·8	2	1	3	0·6
Defective Vision ...	148	119	267	14·7	44	13	57	12·1
Squint	15	1	16	0·8	—	3	3	0·6
Otitis media and other ear diseases	23	13	36	2·0	2	2	4	0·8
<i>Heart Disease :</i>								
Organic ...	6	7	13	0·7	—	3	3	0·6
Functional ...	—	14	14	0·8	—	4	4	0·8
Anæmia... ..	8	6	14	0·8	—	1	1	0·2
Lung Diseases ...	4	13	17	0·9	2	4	6	1·2
Nervous Diseases...	1	—	1	0·05	1	1	2	0·4
<i>Deformities :—</i>								
Spinal Curvature	4	2	6	0·3	13	—	13	2·7
Other forms ...	13	—	13	0·7	—	2	2	0·4

Table 17.—Continued.

GIRLS.

AGES EIGHT YEARS AND OVER.

DEFECTS.	ELEMENTARY SCHOOLS				SECONDARY SCHOOLS			
	No. of Children Inspected. 1,808.				No. of Children Inspected. 380.			
	No. referred for treat- ment.	No. referred for obser- vation	Total	% Defec- tive.	No. referred for treat- ment.	No. referred for obser- vation	Total	% Defec- tive.
Malnutrition... ..	5	2	7	0·3	—	2	2	0·5
Skin and Hair	332	—	332	18·3	51	1	52	13·7
Teeth	232	1	233	12·8	66	—	66	17·3
Adenoids and En- larged Tonsils	50	25	75	4·1	15	30	45	11·8
Enlarged Cervical Glands	—	2	2	0·1	2	13	15	4·0
External Eye Dis- eases	17	1	18	1·0	14	3	17	4·4
Defective Vision	149	133	282	15·6	21	7	28	7·3
Squint	17	4	21	1·1	—	—	—	—
Otitis Media and other ear diseases	16	7	23	1·2	16	4	20	5·2
<i>Heart Disease :</i>								
Organic	7	8	15	0·8	1	7	8	2·1
Functional	—	9	9	0·5	—	7	7	1·8
Anæmia... ..	14	2	16	0·8	—	12	12	3·1
Lung Diseases	3	12	15	0·8	—	10	10	2·6
Nervous Diseases...	1	1	2	0·1	—	—	—	—
<i>Deformities :</i>								
Spinal Curvature	6	3	9	0·5	8	—	8	2·1
Other forms	—	2	2	0·1	2	—	2	0·5

Table 17.—Continued.

BOYS AND GIRLS.

UNDER EIGHT YEARS.

DEFECTS.	ELEMENTARY SCHOOLS				SECONDARY SCHOOLS			
	No. of Children Inspected. 2,157				No. of Children Inspected. 89.			
	No. referred for treat- ment.	No. referred for obser- vation	Total	% Defec- tive.	No. referred for treat- ment.	No. referred for obser- vation	Total	% Defec- tive.
Malnutrition... ..	21	4	25	1·1	—	2	2	2·2
Skin and Hair	205	1	206	9·5	7	—	7	7·8
Teeth	423	1	424	19·6	17	1	18	20·2
Adenoids and En- larged Tonsils ...	111	122	233	10·8	12	9	21	23·6
Enlarged Cervical Glands	—	2	2	0·09	3	—	3	3·3
External Eye Dis- eases	19	1	20	0·9	2	1	3	3·3
Defective Vision ...	16	16	32	1·4	2	—	2	2·2
Squint	37	27	64	3·0	—	—	—	—
Otitis Media and other ear diseases	8	5	13	0·6	2	1	3	3·3
<i>Heart Disease :—</i>								
Organic	1	3	4	0·2	1	2	3	3·3
Functional	—	14	14	0·6	1	4	5	5·6
Anæmia... ..	15	4	19	0·9	1	—	1	1·1
Lung Diseases	17	17	34	1·5	—	5	5	5·6
Nervous Diseases...	1	4	5	0·2	—	—	—	—
<i>Deformities :—</i>								
Spinal Curvature	—	—	—	—	—	1	1	1·1
Other forms	9	8	17	0·8	—	—	—	—

In the last two Tables the figures relating to the Secondary School examinations are taken from Dr. Henry's findings and in the first from Dr. Robertson's. In all the Tables the Elementary School figures are compiled almost entirely from the results of Dr. Robertson's examinations. It is possible that a different standard was taken in conditions such as anæmia or throat defects, which are incapable of exact standardisation.

The following Table compares the heights and weights of the Blackburn secondary school scholars with the standards obtained by Mr. Arthur Greenwood from the records of 800,000 observations of elementary school-children recorded in School Medical Officers' Reports. Groups containing less than 30 children have not been included.

Table 18.

HEIGHTS AND WEIGHTS: SECONDARY SCHOLARS.

Age last Birth- day.	No. Exam- ined.	HEIGHT IN INCHES			WEIGHT IN POUNDS.		
		Anthropo- metric Standard	Average height of B'burn children	Index No. taking standard as 100.	Anthropo- metric Standard	Average weight of Blackburn children.	Index No. taking standard as 100.
BOYS.							
12	88	54·88	55·5	101·1	72·66	73·3	100·8
13	72	56·07	56·3	100·4	77·40	77·3	99·8
14	72	58·16	57·2	98·3	84·00	84·8	100·9
15	47	60·72	61·7	101·6	94·14	98·0	104·07
GIRLS.							
11	32	53·01	54·0	101·8	65·52	70·0	106·8
12	44	55·48	57·2	103·1	73·86	80·0	108·3
13	46	56·81	58·5	102·9	80·37	88·7	110·3
14	57	58·93	60·0	101·8	88·11	100·7	114·2
15	31	60·26	61·9	102·7	96·24	118·1	122·7

With the exception of boys aged 13 years who are very slightly below the average, the weights of the Blackburn scholars are in every case above the average, and the progressive increase in the case of the girls is remarkable.

It was decided by the Committee concerned that treatment would not be provided at the Authority's clinics for children attending secondary schools, except at the request of the Governors. Only one application was made, namely, for the operative treatment of adenoids, and the parents paid in full the fee which the Committee of the Royal Infirmary charge the Authority.

Re-examinations took place some five months after the routine inspections, and it was gratifying to find that so many of the defects had been remedied. At the Grammar School 58 of those referred for treatment were re-examined by Dr. Robertson, who reports that 37 had been treated and were cured; 16 were undergoing treatment and were improving, and in only five (all cases of defective vision) had nothing been done. Dr. Henry reports that she re-examined 116 girls; that all the serious defects (including those of vision) had been treated; that 28 girls still required some treatment, mostly slight, and generally for bad teeth, and that in almost all these cases the parents promised to provide it.

